



THOMAS G. NEWMAN, Editor.

Vol. XXIII. Nov. 16, 1887. No. 46.

Autumn.—The following is from Harper's Bazar:

The butterfly's departed,
Likewise the belted bee,
The small boy in the orchard
Is up the apple tree.

The leaves are crisp and russet,
The sumac's blazing red,
The butternut descending
Is cracked upon your head.

The trees wear lovely colors
In beautiful excess;
All nature seems to rustle
Just like a new silk dress.

L. Highbarger has removed from Adeline to Leaf River, Ills.

Dr. G. Leibrock & Sons, of Western Illinois, made a fine exhibit of honey, bees, and apian supplies at the St. Louis Fair.

Mrs. Mahala E. Chaddock, of Vermont, Ills., is going to Florida to spend the holidays, and wants some others to go with her and "tent" out.

A fire recently destroyed the residence of Mr. W. Z. Hutchinson, at Rogersville, Mich. He had moved his goods out of the house, and his brother was moving his household goods into it at the time it caught fire. It was fully insured. The brothers were building an out-door cellar in which to winter their bees. Heretofore they have been wintered in the cellar under the house.

One of the Books, which is given away with club-subscriptions to the BEE JOURNAL and New York World, as mentioned on page 732, is an illustrated volume of 320 pages, and is entitled "The History of England in Chronological Form, by F. T. Jones." On page 19 the author mentions the first voyage made from the Mediterranean Sea. It was about the year 325, before the Christian era, and was made by Pytheas, a Greek astronomer and mathematician. He spent some time with the inhabitants in the South-East, near Gaul (France), and says that they grew plenty of wheat, which was gathered in sheaves into large barns where the threshing was done; and avers that they were acquainted with bee-keeping, and made mead or metheglin from honey and wheat. The book gives a concise history of England from the earliest times until the present year, the last data being July 19, 1887.

Hon. L. Wallbridge.—When referring to this learned and influential gentleman, on page 694, we had no idea that our next mention of our illustrious friend would be to chronicle his death, which occurred about the time of the writing of our paragraph concerning him. He died of Bright's disease, after an illness of one week. From the Canadian Bee Journal we excerpt this biographical sketch of him:

Lewis Wallbridge was born in Belleville, Ont., Nov. 27, 1816. He was a grandson of Elijah Wallbridge, a United Empire Loyalist, who settled in Canada shortly after the American war of Independence. His father was a lumber merchant of Belleville. The family emigrated from Dorsetshire, England, on account of having taken part in the Duke of Monmouth's rebellion against King James.

Mr. Wallbridge received his education under the late Dr. Benjamin Workman in Montreal, and at Upper Canada College, Toronto. He studied law in Mr. Robert Baldwin's office, Toronto, was called to the bar in 1839, and created a Queen's Counsel in 1856. In 1858 he was elected to the Parliament of Canada, subsequently becoming Solicitor General, and a member of the Macdonald-Dorion Government.

In 1863, whilst holding the office of Solicitor-General, he was elected Speaker of the House, which position he occupied for a little more than four years, and presided over the debate on Confederation at Quebec. After retiring from political life he practiced law in Belleville, and on the death, in 1882, of Hon. E. B. Wood, Chief Justice of Manitoba, was appointed to succeed him. He heard and gave judgment on the first of the recent injunction cases against the Red River Valley railway.

In the apicultural world he was a prominent figure. At the organization of the Ontario Bee-Keepers' Association he was chosen its first vice-president, succeeding to the presidency the next year, and though for some time past he has been a "silent" member, he had always the interest of the association at heart.

As a bee-keeper he was practical, ardent and enthusiastic, keeping his apiary of 100 colonies supplied with all the newest inventions of genuine worth. He secured large yields of honey, though he followed the pursuit merely for pleasure. He was a kind and genial disposition, and he had a host of warm friends who, with us, will mourn his loss.

The Michigan horticulturists and bee-keepers meet in joint convention at East Saginaw, on Dec. 5 to 10, 1887. At the joint session on Dec. 7, these are the subjects to be discussed:

"Do bees injure maturing fruits?" "What trees are valuable for honey and also useful for decorative purposes about a homestead?" "How great are the benefits of honey-bees in promoting the setting of fruits?" "How does bee-keeping supplement horticulture commercially?"

This is a grand arrangement; to have a mutual discussion of these topics will do more to enlighten the "rank and file" than anything else can. The grandest proposition ever made to the world was in these words—"Come, let us reason together." Good-natured discussion is always salutary and harmonizing in its influence. For particulars concerning railroad fares and hotel rates, send to H. D. Cutting, Secretary, Clinton, Mich.

Mr. E. Armstrong, of Jerseyville, Ills., expects to be at the Convention this week with his new reversible hive and section-case, as well as the machine for making (with one motion of a lever) the T tins, and other articles, the inspection of which will be interesting to bee-keepers.

Honey from the Thorn Tree.—The Indianapolis Journal gives the following particulars concerning honey from the before-named tree, and suggests another use for it:

Stenocarpine, the new anæsthetic derived from the American honey locust, commonly known as the thorn tree, which has heretofore been considered a great pest, is likely to become a great blessing in a commercial way, and will probably take the place of the expensive cocaine. While its anæsthetic or narcotic properties are a new discovery to the medical world, there are dozens of the "old seminary boys" about Indianapolis who have had amazing experiences getting drunk by eating the honey from the margins of the pods. "I well remember, 45 years ago," said Dr. W. B. Fletcher to a Journal reporter, "when a beautiful forest covered the now thickly populated triangle bounded by Virginia avenue, East and Stevens streets, then known as 'Stevens' woods.' There, on a sunny slope, about the first of March, the melting snow exposed quantities of great rich pods, which, from winter's frost, had undergone a sort of maceration that had developed the narcotic principle in the honey margin of the pod. A half-dozen of us boys, from 6 to 15 years of age, devoured our fill, with the result of all becoming drunk. Some laughed and staggered; all talked nonsense. I remember but two incidents of this first drunk. One was the entire loss of the sense of taste. The other was getting spanked for the spree—and the spanking didn't hurt."

Mr. J. M. Valentine wrote the article published on page 697, entitled, "The Season of 1887," but in our absence "on the sick-list," things got "a little mixed," and it was credited to another person. This arrangement neither satisfied the real nor the reputed author, and so we make the correction.

Another party, not satisfied with the article, is the firm of D. G. Tutt & Co., who were mentioned by Mr. Valentine as the honey-merchants he visited. They want us to publish the following:

The gentleman who wrote this article did not call on us. We have never had any cans or jar honey in our house; nor do we quote it at figures named. He has evidently called on some of our neighbors, who quote in other papers. We write this in explanation, and justice to ourselves.

We publish the above, not to decide the controversy, but to give both parties a hearing. They must settle the dispute themselves.

Messrs. Geo. Neighbour & Sons, of London, England, on Oct. 24, 1887, wrote us this item:

Our much respected countryman and fellow bee-keeper, Mr. Cowan, has returned, and given us at our Quarterly Conversation, on last Wednesday, a very interesting account of his sojourn amongst American and Canadian apianists. He spoke very highly of the great kindness he had experienced during his journey, for which, in common with him, the members of the British Bee-Keepers' Association feel very grateful.

The Illustrations of the Illustrated London News (American edition) for Nov. 5, present as usual instruction as well as entertainment, and cover the customary broad range of this long established and widely known publication. Reading matter in abundance is also provided, while now it is becoming quite generally known that newsdealers everywhere sell the paper for 10 cents. Subscriptions can be sent direct to the New York office, which is in the Potter Building.

QUERIES

With Replies thereto.

[It is quite useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Space above the Frames in Winter.

Query 493.—How much space above the frames does "Hill's device" allow for the cluster?—C. L. IOWA.

Something over an inch.—DADANT & SON.

From one to two inches.—J. P. H. BROWN.

Entirely too much for out-door wintering.—G. L. TINKER.

Perhaps an inch in depth in the centre.—W. Z. HUTCHINSON.

I use three sticks just $\frac{1}{2}$ inch square on top of the frames.—H. D. CUTTING.

All that is needed. I am not satisfied that they are of any benefit.—G. M. DOOLITTLE.

Not any, as I understand it; only space for bees to pass over from one space to another.—A. J. COOK.

About an inch in the centre, tapering down to practically nothing at each end; the device being placed lengthwise with the tops of the frames.—J. E. POND.

The device introduced by Hill varies in "roominess," so far as I have noticed them. Perhaps the fourth part of an average colony might cluster between the top-bars of the frames, and the little circular arch formed by the Hill device. Some split corn-stalks in pieces a foot long, laid on top of the frames under the quilt, is as good a "device" as I care to have as a passage-way over the frames.—G. W. DEMAREE.

Long before Mr. Hill's device came before the public, I used a bow which I think I should now prefer to Hill's device. My hives are $11\frac{1}{2}$ inches wide, inside measurement. The bow consists of a piece of straight-grained basswood, $3\frac{1}{2}$ inches by 12 inches long; this I soaked, and then pushed into empty hives where they dried in a bowed shape. They are cheaper than Hill's device, and as their ends are within the sides of the hives, no amount of pressure, when packing on top, will break or flatten them down. They make a splendid passage for the bees, and are theoretically "just the thing;" but many large and comprehensive experiments have failed to prove that this passage is of any use whatever.—JAMES HEDDON.

"Hill's device" allows about an inch of space in the centre for the bees to pass from one frame to another. It is a "bow," and of course at the ends the space decreases until it is of no quantity whatever.—THE EDITOR.

Hive Bottom-Boards in Winter.

Query 494.—Will it answer just as well, or better, to leave the bottom-board off entirely when the bees are put into the cellar for winter? One having successful experience informs me that he always leaves it off; that it prevents moisture gathering in the hive; and his bees never trouble by leaving the hive.—Independence, Iowa.

Yes, your authority is good.—DADANT & SON.

Yes, but the bees will winter fully as well with free upward ventilation.—G. L. TINKER.

It will answer very well if mice can be excluded.—J. P. H. BROWN.

I am told that it is done, but I keep the bottom-board on just as the bees fasten it, and give full entrance.—H. D. CUTTING.

I know nothing experimentally of cellar wintering, as I have always wintered bees successfully on the summer stands.—J. E. POND.

If your hive bottom-boards are loose, it may be well to have them off; at least give plenty of space under the frames.—C. C. MILLER.

I never use a bottom-board on my hives in the cellar, but on the contrary, I raise the hives up 2 inches from the bench and tops of other hives.—G. M. DOOLITTLE.

Our fathers did not use bottom-boards at all, and their bees wintered well as far as I know, and I do not see why your plan will not succeed.—G. W. DEMAREE.

It will answer just as well if the temperature is 45° , or thereabouts. If the hive is raised up, and a rim $1\frac{1}{2}$ inches in depth placed between the hive and the bottom-board, it will answer very well.—W. Z. HUTCHINSON.

I have not tried it, but in a proper cellar I believe it would be just the thing. I wish I could easily raise my hives 4 inches from the bottom-boards in winter in the cellar. Then with the entrance wide open, the bees would be very secure.—A. J. COOK.

I presume it is full as well to have bees in winter quarters without bottom-boards to the hives, but I prefer to be excused from handling the hives in and out of the repository in that way.—JAMES HEDDON.

Yes; if the bottom-boards are loose, it will be as well to leave them off, if protection against mice is afforded.—THE EDITOR.

The Marshall County Bee-Keepers' Association will meet in the Court House at Marshalltown, Iowa, on Saturday, Nov. 19, 1887, at 10:30 a. m. and 1 p. m. Subjects for discussion: "Winter Care of an Apiary," and "How to Improve our Society." A cordial invitation is extended to every bee-keeper in this and adjoining counties. J. W. SANDERS, Sec.

Convention Notices.

Union Convention at Chicago.—The North American Bee-Keepers' Society and the Northwestern Bee-Keepers' Society will meet in joint convention at the Commercial Hotel, cor. Lake and Dearborn Streets, in Chicago, Ills., on Wednesday, Thursday and Friday, Nov. 16, 17 and 18, 1887. Arrangements have been made with the Hotel, for back room, one bed, two persons, \$1.75 per day, each; front room, \$2.00 per day each person. This date occurs during the second week of the Fat Stock Show, when excursion rates will be very low.

PROGRAMME.

THE FIRST DAY.

Wednesday Forenoon, 10 O'Clock.

Convention Called to Order. Reports of Secretary and Treasurer. Payment of the Annual Dues, Reception of New Members, and Distribution of Badges.

Production of Comb and Extracted Honey in the Same Apiary.—J. A. Green, Dayton, Ill. Announcements.

Afternoon Session, 2 O'Clock.

Legislation for Bee-Keepers.—Dr. C. C. Miller, Marengo, Ills.

Objects and Methods of a thorough Organization of the Bee-Keepers of America.—Thomas G. Newman, Chicago, Ills.

Foul Brood, How Shall we Treat It?—A. I. Root, Medina, Ohio.

Evening Session, 7:30 O'Clock.

Legs of the Bee.—Prof. A. J. Cook, Agricultural College, Mich.

THE SECOND DAY.

Thursday Morning, 9 O'Clock.

Production of Extracted Honey for Table Use.—T. F. Bingham, Abonia, Mich.

The Production of Comb Honey.—W. Z. Hutchinson, Flint, Mich.

What is the Best Name for Extracted Honey?—Thomas G. Newman, Chicago, Ills.

Afternoon Session, 2 O'Clock.

Cost of the Production of Honey.—J. H. Martin, Hartford, N. Y.

Controlling the Price of Honey.—M. M. Baldrige, St. Charles, Ills.

Getting the Best Price for Honey.—E. J. Oatman, Dundee, Ills.

Evening Session, 7:30 O'Clock.

Commission Men and the Honey Market.—R. A. Burnett, Chicago, Ills.

THE THIRD DAY.

Friday Morning, 9 O'Clock.

Bee-Hives, and Fixtures.—James Heddon, Dowagiac, Mich.

Bee-Keeping alone, or with Other Pursuits; if the latter, in connection with what?—Eugene Secor, Forest City, Iowa.

Out Apiaries.—D. A. Jones, Beeton, Ont.

Afternoon Session, 2 O'Clock.

Selection of Place for Holding the Next Convention, and Election of Officers.

Wintering Bees in the Northern States.—R. L. Taylor, Lapeer, Mich.

Comb Foundation, its Manufacture and Use.—C. P. Dadant, Hamilton, Ills.

Adjournment.

W. Z. HUTCHINSON, Sec.

The Western Bee-Keepers' Society will hold a meeting on Wednesday, Nov. 16, 1887, at the residence of Mr. Peter Otto, corner of Park and 25th streets, Kansas City, Mo. Take the 18th street horse-cars at 9th & Main Sts. for 18th & Brooklyn Sts., thence walk south to 25th St., and thence east one block to the house. We are sure of a cordial welcome from Mr. and Mrs. Otto, and expect a good meeting. JAS. A. NELSON, Sec.

Correspondence.

This mark \odot indicates that the apiarist is located near the center of the State named; δ north of the center; ϕ south; \odot east; \odot west; and this δ northeast; \odot northwest; \odot southeast; and ϕ southwest of the center of the State mentioned.

For the American Bee Journal.

The British Bee-Keepers' Association.

THOS. WM. COWAN.

The British Bee-Keepers' Association was founded in 1874, for the purpose of encouragement, improvement and advancement of bee-culture, particularly as a means of bettering the condition of cottagers and the agricultural laboring classes. The Association consists of President and Vice-Presidents (these are honorary titles), Secretary, Treasurer, and members.

The management of the Association is in the hands of the Chairman, Vice-Chairman, and thirteen members of the Committee, who are all elected annually by ballot, the member receiving the highest number of votes being elected Chairman. Besides these are elected annually an Auditor, Treasurer, Analyst and Librarian. The Secretary is permanently appointed, as are also three experts.

The property of the Association is vested in trustees, viz: the President, Treasurer, Chairman, and one member of the Committee. There are four sub-committees, of which the chairman is an ex-officio member. These committees are Finance, County Associations, Education and Exhibitions. The Educational Committee is also the Examining Board.

The Committee meets for ordinary business once a month; the sub-committees once a month or oftener, if required. Quarterly meetings are held at which the delegates of the county branches meet the committee for discussing county business. The Association has at present 42 county branches, affiliated to it, and numbers upwards of 10,000 members. Each county association has a secretary, committee, and also a president. The presidents of county associations are vice-presidents of the Central Society.

Most of the counties are also divided into districts superintended by a district secretary and local advisors. The conditions and privileges of affiliation are stated on pages 7 and 8 of the report. When a county association is about to be formed, the Central Society sends experts who give lectures in the different towns, and endeavor to create an interest in the subject. A bee-tent, in which manipulations take place, is also sent to the various agricultural and horticultural shows. A gentleman of position is selected as secretary, and the Lord Lieutenant of the county is asked to become its president. All the nobility and gentry in the neighborhood are en-

listed, and are asked to become subscribers. In this way the Central Society numbers amongst its vice-presidents several members of the Royal Family, and some of the principal aristocracy in the land.

When the conditions required by the Central Society are fulfilled, the Branch is taken into affiliation, and sends two delegates to the quarterly meetings in London. A sheet of "Instruction" to secretaries of county associations (Document No. 1) is sent to each secretary; also No. 2, relating to the rules and regulations for exhibitions.

Each Branch must send annual reports and balance sheets in prescribed form for binding up, and should it infringe any of the conditions, or fail to send its balance sheet, it is struck off the list of Branches.

The Central Society and all of its branches have bee-tents which are sent to the various shows in the districts, and any county not having a tent is supplied with one by the Central Society. All shows are held under the rules laid down in sheet No. 2.

When the bee-tent is about to visit a district, notices in the form of No. 3 are sent out, announcing the public manipulation with bees, etc.

At all shows a large number of circulars (No. 4 and No. 5) are given away to those interested. No. 4 gives instructions to beginners, and is entitled, "How to Commence Bee-Keeping." No. 5, "Honey as Food," is distributed in large quantities, so as to educate the public as to the advantages of honey, and creating a market for the product. The suggestions for forming local and county associations are given on sheet No. 6. These are to be affiliated to the Central Society.

One of the principal features of the British Bee-Keepers' Association is the examination for experts. These are of three classes, and have to pass an examination before they can hope for employment as such. Sheet No. 7 explains the different grades of experts, and what is required of them, with syllabus of subjects of examination. Candidates for the third-class certificates are examined in their own county, the Central Society sending an examiner who also acts as judge at the show at which the examination is held.

Each candidate is furnished with circular No. 8, giving him instructions as to what is required of him. The examiner is furnished with Expert Examination paper No. 9, signed by the chairman of the Examining Board, and after accepting the appointment, is responsible for conducting the examination. After the examination he has to send No. 9, with his awards, to the Examining Board, and if the candidate has passed, he gives him the provisional certificate No. 10, which is later exchanged for Parchment Certificate No. 11, duly signed and sealed.

After a candidate has passed a third-class examination, he may try for a second-class one. These are also held in some district in the county. A centre is chosen, and a superin-

tendent—a gentleman of integrity—is also chosen. On the appointed day, the superintendent and secretary meet the candidates, and in their presence open the sealed packet which contains No. 12, instructions to the superintendent, and 13 and 14 containing questions to be answered. The candidates are placed in a row at a table, and question papers 13 and 14 are given to them alternately, three hours being allowed for writing the answers.

The superintendent reads over the rules at starting. At the end of one hour the answers to the first ten questions are collected; the second hour the next ten, and the third hour the remainder; and they are there, in the presence of the candidates, placed in a packet together with the signed certificate of the superintendent, sealed, and at once forwarded to the secretary of the Central Society, who transmits them to the chairman of the Examining Board. The papers are examined by members of the Board, who make awards, the results being published in the *British Bee Journal*. The Board then awards the certificates No. 11.

After passing a second-class examination, candidates can apply for the first-class examination. This is always held in London, and is much more severe than either of the preceding ones. It is held in the presence of the Examining Board, and the candidate is required to have a good, practical, as well as a scientific knowledge of bee-keeping. He is required to answer satisfactorily the questions given on sheet No. 15, and also to give an *ex tempore* lecture on any subject connected with bees and bee-keeping, designated by the examiners.

Candidates having third-class certificates may try for a first class one without the second. First-class candidates having passed, receive certificate No. 11.

Many of the counties appoint only second or third class experts, whose duties are to visit the apiaries of members free of cost, and make a report on County Experts' Visiting-sheet No. 16. The first-class experts are sent out on lecturing tours.

The Central Society holds exhibitions in London (Schedule No. 17), and in connection with the Royal Agricultural Society (Schedule No. 18), which goes from one large city to another. It also holds shows with other agricultural societies (Schedule No. 19), but these are for stimulating the county societies that are not very strong.

All articles sent to Exhibitions must have no name on, or destination mark, until after they are judged, and the cases must have labels attached (No. 20), with name on the reverse side. When goods are returned, the label is reversed.

Every thing must be staged by a certain time, and if not ready, is placed under the stage and excluded from competition.

A ticket of membership (No. 21) entitles a member to all the privileges,

and admission to all shows throughout the country during the year.

The catalogue of last year's show of the Central Society (No. 20) demonstrates that there were 318 exhibits, and 18 tons of honey staged, all in uniform-sized sections and bottles. No. 23 is the annual report of the Central Society, and No. 24 is the volume of reports of the Branches. Those not included have not complied with the rules.

This will give an idea of the organization of the British Bee-Keepers' Association, which, by enlisting the co-operation of the wealthier classes, is able to promote bee-keeping much better than it could otherwise do. The Society has done much by issuing publications at a cheap rate, and by sending out its experts throughout the length and breadth of the land.

The Society being a philanthropic one, aims at inducing as many as possible to keep a few colonies of bees, rather than encouraging specialists in keeping bees on a large scale as a business.

London, England.

[When Mr. Cowan was with us in Chicago, we requested him to give us a description of the organization and work of the British Bee-Keepers' Association. He replied that it would be long and perhaps tedious, but that he would have pleasure in writing it out for us and accompany it with Documents, to more fully illustrate the methods and work of the Association. He did so, and just as he was embarking from New York he sent us an express package with the foregoing very interesting descriptive article, with the accompanying Documents. As the contents of some of these Documents are strictly confidential, and in no case to be made public, we have of course omitted the detailed contents, when mentioning their character.

It is very opportune at this time to obtain the foregoing information concerning the organization and work of the British Bee-Keepers' Association, for it is doubtless the most thoroughly organized and best managed Society of bee-keepers in the world!

At its Central Show of last year it had 18 tons of honey on exhibition, and the exhibits numbered 318. [Then would come the societies of] Continental Europe. But at the bottom of the list (we are ashamed to admit) comes the North American.

We do not state this in order to make an invidious comparison, but to cause active emulation! America with its three hundred thousand bee-keepers ought not to be behind the other countries of the world in anything—especially not in organization!

There is one thing to be said in vindication, however, and that is that our country is so vast—extending from the Equator to the North Pole, and from the Atlantic to the Pacific Oceans—and that the work of organizing thoroughly is a gigantic undertaking, and requires the united energies of the ablest and best devotees of our pursuit.

As this subject is to come up at the Union Convention which convenes to-day in Chicago, we will refrain from saying more at present, hoping to announce in our next issue that at least some steps have been taken looking towards a more creditable organization.—Ed.]

Youth's Companion.

The Price of Success in Bee-Keeping.

REBECCA HARDING DAVIS.

Eternal vigilance is the price of success in any pursuit, and in none more than in bee-keeping. All who attempt it must remember that it is not only labor, but a science, and will make incessant demands, not only on patience, but on bodily strength and intelligence.

"I have kept bees for 45 years," said an old French apiarist last summer, "and I was at the business several years before I felt that I really understood it. I have brought up 18 children, and thoroughly started them in life, thanks to my bees. What would you have more?" What, indeed?

Our French friend began with but a single colony; "one learns in little," and we recommend his example to all beginners.

Choose a place for your hives on sandy, airy ground, at a distance from the barn-yard or any drains. They should be shaded by trees or thick vines, and should be placed facing the east, about 3 or 4 inches from the ground. The old box-hive is used by few apiarists now.

The Italian bees are hardy, work harder than the ordinary German black bee, are more prolific, and, like industrious people, are apt to be amiable. I do not know of any successful apiarist who now prefers the black bee to the Italian.

Food, your bees will find for themselves in any fertile country where there are fruit trees, flower gardens, and late wild blooms, such as golden-rod, thistles and other flowers. But they should have a special provision for them in fields of the Dutch white and Alsike clover (both in the best pasturage), and beds of mignonette, asters, and borage. Buckwheat gives a rank flavor to the honey, and injures its sale in the Eastern markets.

In winter they should be protected either by chaff hives, in stowing in a cellar, or by being covered in close boxes. The method of course varies with the latitude. In States where

the cold is intense, the bees should be removed to a dry, dark, perfectly quiet cellar, which should be well ventilated.

In such papers as this, of course, only the briefest directions can be given. Indeed, they are meant to be only suggestions of work, not rules for it. The beginner should send for a manual which will give instructions in transferring, swarming, feeding bees, preparing honey for the market, etc. Make the acquaintance of practical bee-keepers, and above all do not be afraid to ask questions. Apiarists, like all other naturalists, are usually enthusiastic in their profession, and glad to impart knowledge.

The great objection to this business is the danger of being stung. There are some persons to whom the sting of a bee is actual poison; but they are not likely to undertake the work. Bees undoubtedly do dislike any offensive odor, and promptly punish uncleanness of person in their attendants. They are irritated, too, by any fright or uncertain handling in their attendants. But there is no reason why a cleanly, tranquil person, who moves quietly and betrays no nervous sign of fear, should ever be stung even while handling full hives. For protection, however, wear a veil tied over the hat and around the throat, and close-fitting, long rubber-gloves.

One apiarist, in a neighborhood where honey brought but 16 cents per pound, wholesale, told me that he gave his daughter, when she was 12 years of age, a colony for her own. The first year the colony brought her \$17 clear profit, and the second, with the increase of a colony, \$12. She married at twenty, taking 50 colonies and a comfortable little fortune as a dowry to her husband.

Mr. Cowan's Report of his Visit.

The quarterly meeting of the British Bee-Keepers' Association was held on Oct. 19, 1887. By request Mr. Cowan gave the following account of his visit to America:

When I came here to-day I was not prepared to make any lengthened statement respecting my journeys in North America, but as it seems to be the general wish that I should say something on this matter, I shall be very pleased to give you an outline of what I have been doing over there. It is just three months ago since we (my wife and I) started for New York. After a fair passage we landed in that city, where the thermometer registered 99°, which seemed a very high temperature on coming off the ocean. We could not, therefore, stay in New York, but journeyed north up the Hudson river to Albany.

From there the first establishment we visited was that of Messrs. Aspinwall & Treadwell. These gentlemen are in business together as hive-manufacturers, queen-breeders, and dealers in bees. Their trade is not on a very large scale, but they do a fair

amount of business. We stayed a few days with Mr. Aspinwall, who is proprietor of the *Bee-Keepers' Magazine*, whom I found a most intelligent gentleman, fond of scientific pursuits.

I found their appliances are very much the same as ours; and I may here take the opportunity of saying that throughout my wanderings in the States and Canada, I noticed that most of the contrivances in use were similar to those adopted by us in England. I have been enabled to carry away a few new ideas; but I feel justified in remarking that we are quite equal to our transatlantic friends as regards hive-making and all the appliances necessary in bee-keeping.

That which struck me most to the disadvantage of England, was our deficiency in pasturage. You would be perfectly astonished to see the thousands and thousands of acres of waste land across the water filled with an abundance of honey-yielding plants, immense quantities of honey being lost, owing to the want of bees to collect it.

After spending a few days with Mr. Aspinwall, he took me to see Messrs. Knickerbocker and Locke, the queen-rearers in New York State. Mr. Locke is the former editor of the *American Apiculturist*. These gentlemen rear queens in a way very similar to the Alley system, that is, by inserting strips of cells, and destroying every other egg. They rear the queens in the same way, but destroy two eggs for one left, and keep them in very much the same way as he does.

From there I went to see the largest bee-keeper in the world, Capt. Hetherington, who has 2,700 colonies. He has 20 apiaries, situated at distances of two or three miles apart, in a radius of twelve miles, so that the greatest distance he has to go from home is twelve miles. He and his brother manage the whole of these apiaries, having several men under them; they keep horses and carts, and are hard at work all day long, and continue till evening. Business is commenced at 5 o'clock in the morning. I was there during the hours of business, and saw all the working. The men go around from hive to hive, and take off crate after crate; perhaps a hive has three stories of sections, which are promptly examined, and removed if necessary, and in this way 100 or 150 crates of sections are taken off and carried away. The sections are not removed singly, as we remove them.

Capt. Hetherington produces the largest quantity of honey in the United States. He does not puff himself, and never writes for any of the papers; in fact, one seldom sees his name appearing anywhere in connection with honey-producing. He is one of the most advanced bee-keepers, and the largest producer of honey with the least fuss I have ever seen. He has been at this work for thirty years, always keeping a little ahead of the generality of bee-keepers. He is a good business man, and

knows how to gratify the popular taste, having no difficulty in selling his honey. He uses sections the same as we do, and also separators. He says that it would not answer his purpose to do without separators, as he requires every section to fit into a crate, because there is no time for delicate manipulations, he and his staff working at high pressure from early morning till late at night.

Capt. Hetherington drove us over to see Mr. Ellwood, who is also an advanced bee-keeper, owning 400 colonies, and who produces principally two-pound sections of honey. We also made the acquaintance of Mr. Van Deusen, who makes the beautiful flat-bottom foundation so well known in this country.

From Capt. Hetherington's we went to Boston, and other places. As I before explained, we were obliged to direct our steps northward, owing to the high temperature. We therefore went to Quebec, Montreal, and other places, regretting that Mr. Pringle was too ill to see us when we stopped at Napanee.

At Owen Sound we spent an agreeable time with Mr. McKnight. He has 200 colonies of bees, and uses sections without separators. I saw a number of his sections; they looked very nice, but some not quite so even as those that were produced with separators. I found, generally, in Canada, that it was the practice to dispense with separators, while in the United States they were almost invariably used. The Canadians claim to produce more honey without separators.

After spending some time with Mr. McKnight, I went with him to visit Mr. Jones, and saw his works. He is the largest manufacturer of appliances in Canada, and has a 90 horsepower engine working the machinery for the construction of these articles. I was much interested by what I saw there. The business is conducted on a large scale. Hives are made in pieces, and stored away by the hundreds, and are supplied to purchasers by the dozen, the score, or the gross. Cases are made up of ten hives together.

In Canada, bee-keepers work on a large scale, there being very few in a small way of business. They go in for it as a commercial undertaking; and, of course, taking into account the pasturage and the immense extent of their country, they can do so better than we can. While at Mr. Jones' Mr. Cornell came and invited us, and we spent a very pleasant evening together.

The journey from London to Liverpool is only a question of a few hours, but traveling in America from one city to another generally occupies a great many hours. The country is not so populated as ours, and I found it necessary sometimes to make an excursion of 500 or 600 miles from one bee-farm to another. On one occasion I went nearly 1,000 miles to see the establishment of one honey-producer and foundation-maker, and that was of Messrs. Dadants', of which I shall say more hereafter.

After inspecting Mr. Jones' manufactory, his 400 colonies, and his queen-rearing arrangements, we went to Lake Superior, and from there through Michigan State to Lansing, where I stayed with Prof. Cook. He does not keep bees on a large scale; he is more of a scientific bee-keeper, and tries experiments with different hives, the results of each of which are kept separate. His object is to teach entomology and bee-keeping to the agricultural students, so as to enable them to commence that pursuit on leaving the college.

There are about 300 students at this Agricultural College, many of whom are interested in bees. On one afternoon Prof. Cook asked me to take his class of about forty students, and I am glad to tell you, that by means of my microscope, I was enabled to show them some things they had not seen before. They were generally well educated and intelligent men, who, after leaving the college, go out as farmers. The time spent at the college was most agreeable, the Professor being a charming and sterling man.

While there I found my way to Mr. Heddon's. He seemed to me a very intelligent gentleman, very quick to seize an idea and appreciated the experience of others. He showed me his apiaries, although he was unfortunately suffering from bee-disease, which affects him in a very peculiar way, namely, by producing catarrh, so that he cannot open a hive himself without being attacked by this complaint. However, as I was there, he showed me how the hives were manipulated, the consequence being that he suffered considerably all the evening. He showed me the handling of the shallow hives, and how easy it was to find the queen. I ascertained that he brought his bees through the winter very unsuccessfully, and had lost as many as from 40 to 50 per cent. in wintering.

We discussed the merits of the Heddon and Stewarton hives, and in the course of conversation he stated that last year was a very poor honey season, which bore out the complaint of the Canadians who were over here in 1886. I cannot remember what he said was the average produce, but it was not more than 20 pounds a colony at any rate. I found in his district the honey season had been very bad, whilst in some parts of New York State the reverse was the fact, 60 to 80 pounds per colony being an average yield expected; but there were other districts in which not more than 10 to 15 pounds were obtained.

One gentleman (the President of an association) jokingly said that no one would believe I had been to the United States if I returned to England without boasting about something, and he further said if I came to him I could boast I had seen the apiary where nearly 1 pound of honey per colony had been obtained this year.

From Mr. Heddon's I went to Chicago, and met an old friend, Mr. Newman, who showed me over his place, which is in the city. Unfort-

unately, I did not let him know when I was coming, and, consequently, he was unable to get any bee-keepers to meet me, but he was most hospitable, taking me for a five hours' drive through the city, and showing me all the "lions" of the place.

From there I went to see Mr. Dadant. He is a Frenchman, who settled in America some years ago, and with his son carries on the business of bee-keeping. They also make a large quantity of comb foundation. Last year they turned out 70,000 pounds of foundation, but this year not more than 50,000 pounds, as the season had been such a bad one. It is the best natural-based foundation I have seen in America. They melt about 3,000 pounds of wax at a time, and in this way are able to get the color uniform. The foundation most in demand in America is the natural-based foundation made on the Vandervoort machine. They also produce a large quantity of extracted honey, and a little comb honey. They work for extracted honey just as we do, by storifying or putting one hive on another. Their hive is a little larger than the Langstroth hive, with supers about 6 inches deep. These frames are used for extracting. They have 400 colonies now. This year has been a very bad year, they having obtained only 9,000 pounds of honey. I think the bad season is demonstrated by the fact that their issue of foundation this year has been 20,000 pounds less than last year's.

From the Dadants I went back to Chicago, and also spent a little more time at Lansing. From there we traveled on to Toledo to see Dr. Mason. He was out, but he visited me in the evening, and we had a chat about bees and other matters. I found him a very nice, agreeable gentleman, quite well up in bee-matters.

Mr. Cutting, Secretary of the Michigan Association, who is a very smart and energetic worker in our cause, accompanied him, and I regretted time did not permit me to stay longer to visit them.

From Toledo we passed on to Medina, where we saw Mr. Root and his son Ernest. Mr. Root is the editor of *Gleanings*, and he and his son made our stay there most pleasant. They are both very intelligent and anxious to pick up information. We spent a very agreeable time at Medina. Mr. Root is a very different kind of man from what I had pictured him. He is short, thin, and seems quite worn out with work. He has worked extremely hard, and has succeeded better than any one else on that side of the ocean in popularizing bee-keeping, and creating a demand for appliances. He employs 150 hands, making nothing but hives and appliances. Everything is turned out on a large scale. He has machinery for doing almost everything, and it was quite a treat going over his large factory and his yard. I met one or two Englishmen employed there, who seemed well satisfied with their lot. I found men hard at work when I visited the manufactory, one making the metal corners for the frames was stamping

them out by a very ingenious machine for the purpose.

At Mr. Root's, as I had my microscope with me, I was enabled to clear up some points respecting foul brood. He knew all about foul brood practically, but had not been able to make any close investigation of it microscopically. I must tell you that wherever I went I found the microscopes in use inferior to that I had with me. Even Prof. Cook had not seen the germs themselves, although he had a mounted slide containing specimens. When I showed him the bacillus under my microscope with a one-twelfth Powell's oil immersion, he was much interested. There was no instrument in the college with such magnifying power. Mr. Root told me he had never before seen foul brood in its different stages. The disease over there is exactly similar to what our bees have here.

From Mr. Root's we went to several other places, Niagara among the number, and afterwards met by invitation the Canadian bee-keepers at a large meeting and exhibition of hives and honey in Toronto. The exact quantity of honey exhibited I cannot remember. The exhibits of two hive-manufacturers, the D. A. Jones Company and Messrs. Gould, occupied a great deal of space, but the honey was rather crowded, like the Canadian exhibit here, which militated against the attractiveness of the show. The clover and lime honeys were excellent. As regards the lime honey I think it is superior to ours, the Canadian climate being better suited for its production, but clover honey is as good here as over there.

They had an extraordinary, but, to my mind, somewhat objectionable way of selling honey at the show. A section was cut into four pieces, and each piece offered for sale separately, 5 cents being charged for a quarter. You would see people distributed all over the show biting at these pieces of comb, and eating it as they walked along. By this method a large quantity of honey was got rid of, but it was not pleasant to see the people pushing about in a crowd and messing each other with the sticky substance. I expressed my opinion at the time to some of the bee-keepers, but they assured me it would be impossible to sell the honey at that exhibition on any other plan; and as the all-important object at these shows is to sell the honey, I suppose the custom is likely to continue.

At this meeting I had the opportunity of seeing a large number of the Canadian bee-keepers. They came from districts far and wide. Mr. Young, editor of the *Norwegian Bee Journal*, was there at the time, and we were both very hospitably entertained by our Canadian friends. We also met Mr. Holtermann, our Canadian correspondent, Messrs. Pringle, Emigh, Alpaugh, Hall, Rev. W. F. Clarke, Mr. McPherson, Mr. McKnight, Mr. Cornell, and others. I was honored by the presentation from the bee-keepers of Ontario, of an address, and also a walking-stick with a gold top, which lies here for your

inspection on the table. The address has appeared in the columns of the *Journal*, where the walking-stick cannot be inserted.

I am glad to say that everywhere we went in Canada and the United States we met with a most hospitable reception. We became on good terms at once, our co-workers over the water doing their best to make our time agreeable; they showed us every thing, and our difficulty was to find sufficient time to see all there was to be seen. We might have stayed several days longer at each place, and been made most comfortable and welcome, but it was not practical under the circumstances.

At the Toronto meeting of course I was asked to say something about the British Bee-Keepers' Association, and I made a special point of describing briefly the working and organization of the association. They were very much interested to hear the record of our work and system, as they have nothing of the kind over there. Their associations are merely associations of bee-keepers in certain districts, who meet for the purpose of talking over matters connected with their work.

After the pleasant time spent at the Toronto exhibition, we went to see Mr. Hall, of Woodstock, Vice-President of the Ontario Association, one of the largest Canadian honey-producers. He has 400 colonies, and has produced as much as 200 pounds per colony. Of course he is not able to do that regularly, 80 to 100 pounds being a good average. He makes bee-keeping his sole business, and depends upon it entirely for a living, as many others do in America: Capt. Hetherington is one, for instance; he was a captain in the army during the rebellion. He started bee-keeping, and being fond of it, made so great a success that he has managed to live sufficiently well and bring up a family on the proceeds of the business.

Mr. Heddon has made bee-keeping his only means of subsistence, besides lately the editing of a local paper. He had very little money at starting. Mr. Hall was obliged to give up the business he was in owing to bad health, and took to bee-keeping as a livelihood. He is bringing up his family upon it. As a business, speaking generally, it answers very well in America.

At Mr. Hall's I picked up a great many ideas, but I cannot describe everything on the spur of the moment, having seen so many different things: I shall, however, be able to enter more into detail in the *Bee Journal*. From Mr. Hall's I went with him to see Mr. Pettit, President of the Ontario Bee-Keepers' Association. As he was not able to be present at the Toronto meeting, I thought it was only right I should go and see him, and I stayed with him from Saturday to Monday, and spent a very pleasant time there. His hives are very similar to ours, and he has adopted a frame almost the size of our standard, which he finds answers quite as well as the deep frame he had been

using. He works with sections of 1½ width without separators.

From there Mr. Pettit accompanied me to see two or three other bee-keepers, who lived between his place and St. Thomas. One of these, Mr. Alpaugh, a young man, I found to be an advanced bee-keeper of great intelligence. He is the inventor of the machine for fixing foundation in sections, which I will show you at work here to-night, and which has been sent by Mr. Cornell. You will see it is an ingenious contrivance, but, unfortunately, I cannot show you the working of it as well as he did himself.

From Mr. Pettit's we went through New York State to Washington, and from there to Philadelphia. In Carpenter's Hall, at the latter city, we met with a hearty reception. This Hall is of great historical interest, for it was there that Washington sat, and the first Congress met, and the Declaration of Independence was signed.

At Philadelphia, we made the acquaintance of several scientific bee-keepers. I believe there are more scientific bee-keepers in Pennsylvania than in any other part of the United States. Dr. Townsend is President of the association.

Mrs. Thomas, who goes in actively for bee-keeping there, asked if we had any lady bee-keepers in England. On my replying, "Yes," she said we ought to make more of that fact in the *Bee Journal*, because such notices would stimulate other ladies to undertake the same pursuit. Although it might do in America, bee-keeping on a large scale was not suitable for ladies in England (laughter.) This may appear strange, but there is, undoubtedly, a difference between the mode of life led by ladies in America and in this country. American ladies are used to hard work. In every household every lady does her share of work as much as the man does, and performs her part of the household duties. There is a great difficulty in getting servants there, and she has to do cooking, sweep the rooms, or dust the furniture. Gentlemen also assist in the household duties, sometimes cleaning the boots. You will, therefore, see that what American ladies might do ours could not.

I must not forget to acknowledge our indebtedness to Dr. Townsend, Mrs. Thomas, and Mr. Arthur Todd, for their kindness. The latter gentleman took us about and showed us everything of interest in Philadelphia. It was there I met our friend, Mr. Hooker's son, who also kindly showed us about. From there we traveled back to New York, and across the ocean home.

I am afraid in the foregoing remarks I have only given a slight idea of what we saw and did, and the districts we have traveled over, but the pages of the *Bee Journal* shall give you fuller particulars from time to time. Wherever I took my microscope it was a source of great interest and delight, and the preparations were attentively examined. I have already told you how hospitably we

were received everywhere both in the United States and Canada. All bee-keepers seemed pleased to meet me, not only as a brother bee-keeper, but as the representative of the bee-keepers of this country. I assured them that the compliments paid to me would be appreciated by the members of our association here, and I can now only repeat my expression of thanks for all the kindnesses I received on the other side of the Atlantic.

Our trip was a very enjoyable one, although traveling is not so easy there as here, and one becomes wearied by the long distances. Of course, my wife could not bear the fatigue of accompanying me everywhere. Accommodation is not so good there as here; sometimes, in out-of-the-way places, we have had to sleep on the floor, owing to un-welcome bed-fellows. In conclusion, let me say I shall be happy to give you any information in my power, if you will ask me questions on any specific points. (Loud and protracted cheering.)

After answering some questions, the following resolution was unanimously carried:

That this meeting expresses its best thanks to Mr. Cowan for his kind and lucid description of American apiculture in the United States and Canada, and also desires to record its sense of the kindness and hospitality shown to him as the representative of British bee-keepers by American and Canadian bee-keepers.

Mr. Sambels proposed that a copy of the resolution should be sent to the *AMERICAN BEE JOURNAL*, the *Canadian Bee Journal*, and *Gleanings*, which proposition was seconded and supported by two gentlemen among the audience, and carried unanimously.

We are very sorry that Mr. Cowan could not have remained long enough to have attended the present union meeting of the bee-keepers of North America, where he would have received a cordial welcome, and made the acquaintance of hundreds more of our representative apiarists than he could have met in any other way.

One of the resolutions passed by the "North American Bee-Keepers' Society," after receiving the report of its President, who had officially visited European apiarists in 1879, reads as follows:

Resolved, That this Association rejoices in the cordial and enthusiastic reception accorded to President Newman by the apicultural societies and leading bee-masters in Britain and on the European continent, trusting that the harmonious feeling evinced may always be cherished by the bee-keepers of the world towards each other. This Association hopes that the friendly visit which has been made, will ere long be returned by some one or more of prominent apiculturists of Europe, to whom it will be our pride and pleasure to extend as hearty a welcome as that given to our representative.

The latter part of the above resolution has been realized by our hav-

ing the opportunity of showing how we welcome our representative European brethren in the persons of Mr. T. W. Cowan, of England, and Mr. Ivar S. Young, of Norway, as well as the late Mr. James Anderson, of Scotland, who made us a visit in 1882.

Now we would gladly welcome many more of our European apiarists whose names are "household words" the world over; and whose personal acquaintance, in nearly every instance, we made seven years ago, viz: Dr. Dzierzon, the Baroness of Berlepsch, Herrn Vogel, Hilbert, Dennler, and Gravenhorst, of Germany; Karl Gatter, of Austria; Visconti de Saliceto, Count Barbo, and Dr. Dubini, of Italy; Ed. Bertrand and Pastor Jecker, of Switzerland; L'Abbe du Bois, and J. De Layens, of France; Dr. Butlerow, of Russia; and many others too numerous to mention.

London Journal of Horticulture.

Preparing Bees for Winter.

A. PETTIGREW.

Feeding bees at some seasons has of late years been necessary and important. Those who have attended properly to this work have been the most successful and have had but few, if any, losses by death from starvation. If any reader has not given his bees enough to keep them till March, I would advise him to do so as soon as possible. Autumn feeding, in my opinion, should be completed in September, for more than one reason. The quieter bees are after September ends, the better; the quieter they are, the less honey they consume. Feeding excites bees to fly abroad, and in doing so many colonies may be lost during cold or inclement weather, and feeding often excites the bees to set eggs widely in mild autumn weather. Cold weather may come and cause the bees to draw themselves within the lines or limits of their brood, and thus leave it to be chilled to death. Foul brood results, and ultimately the ruin of the bees, from feeding at untimely seasons.

Colonies this autumn are, generally speaking, strong in bees, which have, during the last few weeks, consumed much of their winter stores. In mild winters and open weather the bees in very strong colonies require or eat from 12 to 15 pounds of stores from the middle of September till the middle of March. The bees of small and weak colonies will not consume half as much.

While autumnal feeding is going on, the entrances of hives should be contracted, in order to prevent robber bees from entering and extracting the honey.

After feeding has been completed, the boards of the hives should be well

cleaned. The wax-moth, next to foul brood, is a destructive pest in apiaries. It has been said that Langstroth recommended wooden hives because the wax-moth could find no resting place in them; but it is now well known that the wax-moth is no respecter of hives, and breeds as fast in wooden as in straw hives. The scales of wax that drop on the boards of hives are gathered together and form nests for the maggots of the moth. If either earthenware or iron vessels used for feeding purposes be left for a short time on the centres of the bottom-boards, young moths will soon be found beneath them as well as around the edges of the hives. The maggots of the moth feed on their nests—viz., the fallen or lost scales of wax, till they are able to crawl to and lay hold of the combs of the hives. Amongst the combs the maggots make sad havoc, for they live upon pure wax and consume much of it.

Covering hives well and warmly for the winter months is the finishing work of the apiary, and though last in time it is not least in importance. My preaching on this point is better than my practice, for my hives are never sufficiently covered in winter and spring. A quantity of material of some kind is necessary to cover sixty large hives. Bees are tiny, fragile creatures, and require attention in cold weather. Both cold and wet are hurtful to them. Hives should have good, warm under-coverings, and their outer coverings should be waterproof. Not a drop of rain should be allowed to touch either hives or boards after September, for if either hives or boards are damp in winter, frost may convert the moisture into ice.

Hives in bee-houses are easily kept dry and warm in winter, and hence my prejudices against bee-houses grow less and less. The protection of a good, warm covering should be given to hives either with or without bee-houses, and such covering should not be removed altogether from hives till the end of April.

All covers of all kinds of hives should be porous enough to let the moisture of the hives pass through; otherwise it would be condensed, keep the hives damp, and do harm. Warmth, dryness, and ventilation should all be considered in covering hives for winter and spring.

For the American Bee Journal.

Results of the Season of 1887.

A. HOKE.

On page 235, I reported 32 colonies in fair condition. I lost one colony by spring dwindling, sold one, lost 4 by robbing and queenlessness, and had an increase of 2 colonies. I now have 28 in winter quarters, all well packed in sawdust and planer shavings.

One colony is queenless, and, of course, it will be lost, but it will not starve. I lost its queen in this way: It was light in bees. A bee-keeper

took what little honey a colony had, and gave me the bees. I put them in at the entrance between sundown and dark, with no loss of bees. The next day the one queen was brought out dead; the third day after, the other queen was killed also.

I never took so much pains to care for my bees as I have this fall, and if I get them through the coming winter as well as I did last winter, I shall owe the editor a vote of thanks for urging bee-keepers to take good care of their bees.

My crop consists of 200 pounds of comb honey, and 100 pounds of extracted. These results might give a younger bee-keeper the "blues," but I have faith that all will be right in the end, and will not abandon my bees.

I have also been working on a device to make honey into vinegar in a short time. My device holds one-half gallon, and in warm weather in 24 hours it will be brought on so far that in two to four weeks it will be first-class vinegar. The beauty of it is, that one can stop the making of the vinegar at any time, and for as long as he pleases, while other devices have to be fed often or be unpacked.

Union City, Ind., Nov. 7, 1887.

Prairie Farmer.

Judicious Use of Smoke on Bees.

W. M. KELLOGG.

Every owner of a colony of bees should have a smoker; it will pay for itself every year. Who does not remember the momentous times of "robbing the bees," when the victim prepared himself for the fray by stuffing his pants into his boot-tops, tying his big coat around him, gloves on his hands, and if he possessed no veil of any kind, his face all tied up so that only one eye had a little peephole, and nine chances to one that bees enough got into that same peephole to make his face swell up till it looked like a Chinese idol.

In this garb the honey was forcibly taken away from the bees—in very truth robbing them—which they very naturally resented with all their little might, not so very small either when we consider the weight of evidence a bee's stinger carries with it. But the honey was gotten off at the expense of a very angry and sweaty man; everybody and everything about the place, even to the sooty iron top to the chimney, stung out of their senses; the dog sent yelping under the barn, and the man locked out of the house because he "had so many bees on him," goes into the wood-shed to dissolve, pick out the stingers and swear, and the bees are so cross for days after, that no one dares go near them.

Now all this is changed by the use of the little smoker. A piece of rotten wood is lighted and placed in the barrel; the bellows is squeezed a few times to see that it is going well, and with no veil or gloves on, the bee-master goes to the hive from the side

or rear, and gives two or three puffs of smoke in at the entrance; waiting a few moments for the bees to fill themselves with honey, the cap is taken off, then the corner of the quilt or honey-board (if of a movable-comb hive) is lifted, and a few light puffs given as it is taken off, and with slow, even motions, the combs can be taken out, the needed work be done, and the hive closed again.

With the box-hive it can be turned over and examined from the bottom, or the boxes taken off for use or sale. It is all done in a few minutes, no fuss, and in a short time the bees are working as merrily as ever with nothing to show that their hive had been touched.

But there is much injudicious use of the smoker when the poor bees are smoked till they do not know what to do, and run wildly all over the hive, the ground, and the bee-keeper; the queen stops laying, and for the time being the colony is as badly demoralized as was the one without any smoke. I have seen a man who called himself a practical bee-keeper, smoke a colony of bees till I felt sick for the poor little bees, and said, "For pity's sake, hold on!"

Oquawka, Ills.

The Odorless Foul Brood.

We have taken the following from the *London Journal of Horticulture*. It is written by a Hallamshire bee-keeper, and will be read with interest:

Amongst all the infectious diseases from which bees suffer, the above is the most insidious. Phenol, salicylic acid, camphor, and in fact all and every remedy which has been known to cure the offensive form of foul brood, is powerless to cure or prevent the odorless form of the disease spreading. Its appearance is exactly like the other—viz., cappings of cells sunken, dark-colored dead brood, coffee-colored and rosy, but it has no smell whatever, hence it is very apt to cause no alarm, and by interchanging combs one may get it into every colony before its nature is suspected, particularly when combs are changed in the autumn and spring to save feeding.

I write this from bitter experience. I first noticed it in 1881, but as all authorities agreed that foul brood could not be mistaken on account of its offensive smell, and that it was the only infectious disease bees were liable to, I thought it must be chilled brood, then thought no more of it. In 1882, by changing combs, I had it in nearly every colony—about 18; I then began to experiment with it. First, I shaved the caps off diseased combs, and put them into healthy colonies to see if it was infectious, and as the first brood hatched out of the diseased cells apparently healthy, I at once concluded that it was not infectious. In this I made an unfortunate mistake, for had I noticed the colonies until after the second batch of brood began to hatch, I should

have not only found it in the comb introduced, but all through the brood-nest.

I then took the queens from the diseased colonies, and introduced them into healthy ones to see if the disease was in the queen alone, and as such colonies at once became diseased, I at once concluded that the disease was congenital, and not really infectious. Here I made another error. I was supported in this in breeding queens in small nuclei, which turned out diseased, while those bred in strong colonies proved healthy. Here let me say, that thinking the disease was not infectious, I may have unconsciously used infected combs in the nuclei, and combs free from taint in the full colonies.

In 1884 I thoroughly tried Hibbert's plan, of fumigating with salicylic acid, feeding the acid in syrup (Cowan's plan of curing foul brood), also placing large pieces of camphor in the hives. I never saw much of the disease in the spring, the reason being that every autumn I get many driven bees and young queens, which were chiefly the bees that passed through the winter, and which is explained in the sequel.

In the spring of 1885, still thinking the disease lay alone in the queen, I sent a native British queen, that I had obtained with driven bees the previous fall, that was producing foul brood, to Mr. Frank Cheshire, who at once wrote back, saying that her ovaries were full of bacilli, which was quite new to him; that the bacilli lay in strings, and resembled bits of sticks crossed about anyhow, presenting a striking contrast. He asked for samples of the brood, which I sent him, and in which he found the same bacilli.

During the summer I sent Mr. Cheshire a number of queens that I knew had produced healthy brood and bees in the spring—two were with swarms hived on perfectly empty but tainted combs—and he found the same bacilli in the ovaries of every one. One I sent him was from a colony that had not more than 14 or 15 foul cells in all, and he said he examined her ovaries without seeing any bacilli, and was going to report that she was healthy, when he examined the last portion and found the same bacilli. This was a most important report to me in understanding this disease, and I think I was most fortunate, as well as the bee-keeping world, in having the services of such a skillful microscopical dissector as Mr. Cheshire.

Towards the close of the year 1885, I decided to try Mr. Cheshire's phenol remedy for foul brood, which he claimed to be a certain cure; so I thought if it will one kind of bacilli, why not another? and as, owing to the weather, no honey was coming in, I considered I had a splendid opportunity to get rid of it without destroying a comb. As I had lots of driven bees, all healthy, I destroyed the old infected queens, united these, and fed upon phenolated syrup. The combs were filled with it; 18 colonies were packed up for winter reduced from 26, and 20 lots of driven bees

were added; 3 of these 18 never had been diseased, and they were the only healthy ones I had in the spring of 1886. The rest were either dead or weak, and all that were alive were diseased, and to make matters worse, the 3 healthy ones found a way into one of the colonies that had died, and cleared out the phenolated syrup from the combs, and they also became diseased.

This circumstance was valuable in its way, as it proved the spores of the disease can be carried in the honey from an infected hive. I concluded that the spores went in the honey to the queen, and as aliment to the eggs, which became foul, producing in turn spores to again go to the queen, and so pass through more eggs, in which I was confirmed in the fact that when bees are bringing in honey the colony increases in strength, and shows little traces of disease; while when it ceases, and the queen has to be fed from honey stored in infected combs, the bees rapidly dwindle and the brood becomes very foul. Therefore, I reasoned, that if I turned the queen and bees into an empty hive or box, and if no honey was coming in, feed them for four days to induce the bees to build comb into which the queen could deposit her diseased eggs, and before they began to hatch turn the queen and bees into a clean hive on starters only, I ought to get clear of it, and even cure the queens. This proved to be correct, for every case so treated has proved a cure, even curing in a most complete manner every diseased queen.

I have at the present time several queens whose mothers were diseased last year, and now I have over 30 fine, strong, healthy colonies inhabiting hives, frames, and quilts that have had diseased colonies in them, yet in looking over them this fall I could not find a single "foul" cell.

Having described the disease, I will now describe how to stamp it out if it is noticed in the spring or summer: Turn the bees and queen into an empty hive or box on the old stand, allowing them full liberty to fly where they wish in search of stores; if they can get home freely they will need no more attention for four days; if not, then they must be fed for four days. In the meantime, extract the honey from the combs, which, after straining, will be all right to eat, but the greatest care must be taken against any bee getting a sip of it.

Then melt the combs for wax—there is nothing gained in trying to save the brood—bake or boil every frame, quilt, and hive; if you have neither an oven nor boiler to hole the latter, rear it against the kitchen fire until the inside at least is well baked; now fix foundation-guides not more than half an inch deep in the frames, and at the end of four days put it on the old stand, dump out the bees from the hive or box, and let them run into the hive, and at once destroy the combs they have built. If honey is to be had, the work is done; if not, they must be fed, taking great care that all food and feeders are first boiled.

The plan I here describe is quite novel, never having, to my knowledge, been advocated as a means of curing foul brood or other forms of disease; though a plan much like it called the "starving" process has been much advocated. But, according to many reports, it seems rather uncertain; and well it may, as bees starve according to the amount of activity they exhibit. Thus they may drop down exhausted in 24 hours, or they may show no signs of weakness at the end of 14 days, as I soon found in my experiments; hence the plan I recommend is more simple and certain.

England, Oct. 20, 1887.

Local Convention Directory.

1887. *Time and place of Meeting.*
- Nov. 16.—Western, at Kansas City, Mo.
J. A. Nelson, Sec., Muncie, Kans.
- Nov. 16-18.—North American, at Chicago, Ill.
W. Z. Hutchinson, Sec., Flint, Mich.
- Nov. 19.—Marshall County, at Marshalltown, Iowa.
J. W. Sanders, Sec., LeGrand, Iowa.
- Nov. 25, 26.—Pike Co. & Ills. Cent., at Pittsfield, Ill.
W. T. F. Petty, Pres., Pittsfield, Ills.
- Nov. 28.—Hardin County, at Eldora, Iowa.
J. W. Buchanan, Sec., Eldora, Iowa.
- Dec. 7-9.—Michigan State, at East Saginaw, Mich.
H. D. Cutting, Sec., Clinton, Mich.
- 1888.
- Jan. 7.—Susquehanna County, at New Milford, Pa.
H. M. Seeley, Sec., Harford, Pa.
- Jan. 20.—Haldimand, at Cayuga, Ontario.
E. C. Campbell, Sec., Cayuga, Ont.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Plenty of Winter Stores.—M. H. Freeman, Olustee Creek, Ala., on Nov. 4, 1887, writes:

In my report on page 234, it should have read *ten colonies* instead of "100 colonies." I have increased them to 15 colonies this season, and have taken 400 pounds of extracted honey. This makes an average of 40 pounds per colony, spring count. They have probably enough natural stores for winter, if it is not unusually long and severe; but I intend to feed them some sugar syrup yet, as I think there can be no danger of an over-supply of winter stores.

Wintering Bees.—Allen Bartow, Milan, Ohio, on Nov. 8, 1887, says:

I wintered my bees last winter without the loss of a colony. There were very few dead bees at the hive-entrances at any time, winter or spring. My hives are of the Simplicity style. I make cases of boards 3 inches higher, and 6 inches longer and broader than the hives, with movable cover and bottom. They are perfectly water-tight. I place the hive on the bottom board 2 feet from the ground,

and the case over the hive, leaving the hive-entrance clear so that the bees can go in or out at will. I pack all the space between the hive and case with dry leaves of any kind; then I cover the case and weight it down to keep the wind from blowing it off. I keep the hive-entrances open when covered with snow, and I pay no attention to top ventilation, as I regard it as being injurious.

Results for Ten Years.—Mr. L. D. Ormsby, Pierpont, O., on Oct. 21, 1887, writes:

My report for ten years of keeping bees and producing honey is as follows:

| | Colonies. | | | | Pounds Honey. | |
|------|-----------|-------|-------|-------|---------------|-----------------|
| | Spring. | Fall. | Sold. | Died. | Bo't. | Comb. Extract'd |
| 1878 | 1 | 3 | .. | 3 | 2 | |
| 1879 | 2 | 9 | .. | .. | .. | |
| 1880 | 9 | 31 | 1 | .. | .. | 900 100 |
| 1881 | 30 | 54 | .. | .. | .. | 1,800 700 |
| 1882 | 54 | 80 | 12 | .. | .. | 4,500 1,000 |
| 1883 | 68 | 100 | 17 | 45 | 2 | 4,000 1,400 |
| 1884 | 40 | 81 | 8 | 27 | .. | 3,100 1,100 |
| 1885 | 46 | 94 | 15 | 3 | .. | 2,800 1,300 |
| 1886 | 77 | 83 | 1 | 14 | .. | 3,300 1,200 |
| 1887 | 68 | 76 | .. | .. | .. | 2,100 800 |
| 395 | 612 | 54 | 92 | 4 | 22,500 | 7,600 |

I have had 30,100 pounds of honey, which gives an average of over 76 pounds per colony, and the average price of 15 cents per pound, making something over \$11.40 per colony as a yearly average. I winter my bees on the summer stands packed in chaff and sawdust. I owe many thanks to the editor and correspondents of the AMERICAN BEE JOURNAL for my success in bee-keeping.

Bees in Winter Quarters.—H. O. Kruschke, Deuster, O. Wis., on Nov. 7, 1887, says:

My bees stored about 400 pounds of surplus honey, and have an abundance for winter stores. I put 52 colonies into winter quarters on Oct. 25, the earliest that I ever put bees in for the winter. The scarcity of honey has advanced the price of it. I hope it will be more plentiful next year, even if prices fall a little.

Report for 1887.—J. A. Reeds, Hinesborough, O. Ills., on Oct. 14, 1887, writes:

I have 185 good colonies of bees, and 1,500 pounds of honey was all of my surplus crop. I think that nearly all of my colonies are pretty well supplied with honey, at least enough for winter, I think.

We are sometimes asked who our authorized agents are. Every subscriber is such an agent; we have no others, and we greatly desire that each one would at least send in the name of one new subscriber with his own renewal for 1888. The next few weeks is the time to do this. We hope every subscriber will do his or her best to double our list of subscribers.



Issued every Wednesday by

THOMAS G. NEWMAN & SON,

PROPRIETORS.

923 & 925 WEST MADISON ST., CHICAGO ILL.

At One Dollar a Year.

ALFRED H. NEWMAN,

BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save as much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We receive letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

We will Present Webster's Dictionary (pocket edition), and send it by mail, post-paid, for two subscribers with \$2. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office or we will send them all to the agent.

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

Simmins' Non-Swarming System.—We have received another shipment of these books, and have made such favorable terms, that we will now club them with the BEE JOURNAL for one year, both postpaid, for \$1.25. We can supply all orders by return mail. The subscription to the BEE JOURNAL can be for next year, this year, or may begin anew at any time.

California Excursions.

At frequent dates of each month, the Burlington Route, C. B. & Q. R. R., runs excursions to San Francisco, Los Angeles and San Diego, at greatly reduced rates of fare. By the "Burlington" one can have a choice of routes to California, as its lines from Chicago, Peoria and St. Louis extend to Denver, Council Bluffs, Omaha, Saint Joseph, Atchison and Kansas City. Should one desire to make the return trip via Portland, Oreg., they can continue their journey south or east from St. Paul or Minneapolis, over the Burlington Route, to Chicago, Peoria or St. Louis. For California excursion dates, rates, tickets or further information, apply to ticket agents of the C. B. & Q. or connecting railroads, or address Paul Morton, General Passenger and Ticket Agent, Chicago, Ills. 43A4t

A Valuable Book Given Away.—We have made arrangements by which we can supply the AMERICAN BEE JOURNAL and the New York World—both weekly—for one year, for \$2.10, and present the subscriber with one of these books, bound in Leatherette Free Calf:

HISTORY OF THE UNITED STATES—from 432 to 1887.—320 pages.—Price, \$2.00.

HISTORY OF ENGLAND—from before the Christian era to 1887.—Price, \$2.00.

EVERYBODY'S BOOK—a treasury of useful knowledge.—410 pages.—Price, \$2.00.

The extra 10 cents is for postage on the book, which must be selected by the subscriber at the time of sending the subscription, and cannot be afterwards exchanged.

The book selected will be mailed in a cardboard case, at the subscriber's risk; if lost it cannot be replaced. Be sure to write your name, post-office, county and State plainly, and then the risk of loss is very small. The subscriptions can commence at any time.

Remember, the amount is \$2.10 for both papers, and the Book and postage.

Sweet Clover, (*Melilotus alba*), furnishes the most reliable crop of honey from July until frost, and at the same time it furnishes the most delicious honey, light in color, and thick in body. It may be sown in waste places, fence corners, or on the roadside, at any time of the year.

Sow two years running, on the same land, and the honey crop will be without intermission. Money invested in Sweet Clover Seed will prove a good investment. The Seed may be obtained at this office at the following prices: \$6.00 per bushel (60 lbs.); \$1.75 per peck, or 20 cents per pound.

We have a large quantity of CHOICE WHITE EXTRACTED HONEY, in kegs holding from 200 lbs. to 225 lbs. each, which we will deliver on board the cars at 10 cents per lb. Orders solicited.

We pay 20 cents per pound, delivered here, for good Yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

Enameled Cloth for covering frames, price per yard, 45 inches wide, 20 cents; if a whole piece of 12 yards is taken, \$2.25; 10 pieces, \$20.00; if ordered by mail, send 15 cents per yard extra for postage.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

| | Price of both. | Club |
|------------------------------|----------------|------|
| The American Bee Journal | 1 00 | 1 00 |
| and Gleanings in Bee-Culture | 2 00 | 1 75 |
| Bee-Keepers' Magazine | 1 25 | 1 20 |
| Bee-Keepers' Guide | 1 50 | 1 40 |
| The Apiculturist | 2 00 | 1 75 |
| Canadian Bee Journal | 2 00 | 1 75 |
| Rays of Light | 1 50 | 1 35 |
| The 7 above-named papers | 5 25 | 4 50 |
| and Cook's Manual | 2 25 | 2 00 |
| Bees and Honey (Newman) | 2 00 | 1 75 |
| Binder for Am. Bee Journal | 1 60 | 1 50 |
| Dzierzon's Bee-Book (cloth) | 3 00 | 2 00 |
| Root's A B C of Bee-Culture | 2 25 | 2 10 |
| Farmer's Account Book | 4 00 | 2 30 |
| Western World Guide | 1 50 | 1 30 |
| Heddon's book, "Success," | 1 50 | 1 40 |
| A Year Among the Bees | 1 75 | 1 50 |
| Convention Hand-Book | 1 50 | 1 30 |
| Weekly Inter-Ocean | 2 00 | 1 75 |

One yearly subscription for the **AMERICAN BEE JOURNAL** must be ordered with each paper or book, in order to take advantage of the prices named in the last column.

To All New Subscribers for 1888 we will present the remaining numbers of 1887—over a year's subscription to the oldest and best bee-paper in America for only \$1.00! No investment will repay such excellent dividends to a bee-keeper, as a year's subscription to the **AMERICAN BEE JOURNAL**. Subscribe now, and get the rest of the numbers of this year free. The sooner you subscribe the more you will receive for your money.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the **BEE JOURNAL**. It is now so cheap that no one can afford to do without it. We will present a **Binder for the BEE JOURNAL** to any one sending us three subscriptions—with \$3.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the **BEE JOURNAL**, and will send two or more free of cost to any one who will use them, and try to get up a club.

We Supply Chapman Honey-Plant seed at the following prices: One ounce, 40 cts; 4 ounces, \$1; 1/4 pound, \$1.75; 1 lb., \$3. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

Should any Subscriber receive this paper any longer than it is desired, or is willing to pay for it, please send us a postal card asking to have it stopped. Be sure to write your name and address plainly. LOOK AT YOUR WRAPPER LABEL.

We have a few Sets of the **BEE JOURNAL** for the present year, and can fill orders until further notice, for all the numbers from the first of last January. New subscribers desiring these **back numbers**, will please to state it plainly, or they will not be sent.

Honey and Beeswax Market.

CHICAGO.

HONEY.—We quote: White clover 1-lb. sections 20¢@21¢; 2-lbs., 18¢@19¢; dark 1-lb., 17¢@18¢; 2-lb., 15¢@16¢. Extracted, firm at 7¢@10¢, depending upon the quality, and style of package. Receipts are somewhat heavier, and when sold in a jobbing way prices must be shaded from 1 to 2 cts. per lb. **BEEWAX.**—22¢@23¢.

Nov. 8. S. T. FISH & CO., 189 S. Water St.

CHICAGO.

HONEY.—We quote: White comb in 1-lb. sections or about, brings 18¢@20¢, some fancy shipments are held at 22¢; 2-lb. sections, 16¢@18¢. Dark honey is slow sale. Extracted, 7¢@10¢.

BEEWAX.—22¢@23¢. H. A. BURNETT, 161 South Water St.

DETROIT.

HONEY.—Best white in 1-lb. sections sells as high as 18¢. A few lots are held at 20¢. Demand increases as fruit becomes scarce.

BEEWAX.—23¢. M. H. HUNT, Bell Branch, Mich.

CLEVELAND.

HONEY.—Best white 1-lb. sell readily at 19¢@20¢; 2-lbs., 17¢@18¢. White clover extracted, 8¢.

BEEWAX.—25¢. A. C. KENDEL, 115 Ontario St.

SAN FRANCISCO.

HONEY.—We quote: Extracted, white liquid, 6¢@6¢; amber colored and candied, 5¢@5¢; white to extra white comb, 15¢@17¢; and amber, 10¢@12¢. Supplies and demand are small.

BEEWAX.—17¢@21¢ for good quality

Oct. 15. SCHACHT & LEMCKE, 123-124 Davis St.

SAN FRANCISCO.

HONEY.—We quote: White to extra white comb 16¢@18¢; amber, 10¢@14¢. Extracted, light amber, 6¢@6¢; amber, dark and candied, 5¢@5¢; extra white will bring 7¢, but none is in the market.

BEEWAX.—19¢@22¢.

Oct. 3. O. B. SMITH & CO., 423 Front St.

NEW YORK.

HONEY.—We quote: Fancy white in 1-lb. sections, 17¢@19¢; the same in 2-lbs., 15¢@16¢; buckwheat 1-lb., 12¢@14¢; 2-lbs., 10¢@12¢. Off grades 1¢@2¢ per lb. less. White extracted, 8¢@9¢; buckwheat, 6¢@6¢; Scotch, per gallon, 60¢@70¢.—Market seems to be unsettled.

BEEWAX.—22¢@23¢.

MCCAUL & HILDRETH BROS., 28 & 30 W. Broadway, near Duane St.

KANSAS CITY.

HONEY.—We quote new crop: Choice white 2-lb. sections, 16¢@17¢; dark 2-lbs., 12¢@14¢; choice white 1-lb., 18¢@20¢; dark 1-lb., 14¢@16¢. White extracted, 8¢@10¢; dark, 6¢@7¢. Demand good, but light supply.

BEEWAX.—21 to 22¢.

Sep. 21. HAMBLIN & BEARSS, 514 Walnut St.

KANSAS CITY.

HONEY.—We quote: Choice white 1-lb., 20¢; dark, 15¢@16¢; choice white 2-lbs., 18¢; dark, 14¢. Extracted, 8¢@10¢. California—white 1-lb., 15¢; dark, 13¢; white 2-lbs., 13¢@15¢; dark, 14¢@15¢. White extracted, 9¢; amber, 8¢. Supply fair.

BEEWAX.—No. 1, 22¢; No. 2, 18¢.

Oct. 6. CLEMONS, CLOON & CO., cor 4th & Walnut

ST. LOUIS.

HONEY.—Choice comb, 15¢@18¢; latter price for choice white clover in good condition. Strained, in barrels, 4¢@5¢. Extra fancy, of bright color and in No. 1 packages, 1/2-cent advance on above. Extracted, in bbls., 8¢@9¢; in cans, 6¢@7¢. Short crop indicates further advance in prices.

BEEWAX.—20¢ for prime.

Oct. 21. D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—We quote extracted at 3¢@3¢. per lb. Choice comb, 18¢@20¢, in the jobbing way. The demand is fair for honey of all kinds, and keeps pace with arrivals.

BEEWAX.—Demand good—20¢@22¢. per lb. for good to choice yellow, on arrival.

Nov. 10. C. F. MUTH & SON, Freeman & Central Av.

NEW YORK.

HONEY.—We quote: Fancy white 1-lb. sections, paper boxes, 18¢@19¢; fancy 1-lb., glassed or un-glassed, 17¢@18¢; fancy 2-pounds, glassed, 15¢@16¢. Lower grades 1¢@2¢ per lb. less. Buckwheat 1-lb., paper boxes, 11¢@12¢; same glassed or un-glassed, 10¢@11¢; 2-lb., glassed, 10¢. Extracted, white, 9¢@10¢; dark, 6¢@7¢. Demand good, market firm.

Oct. 13. F. G. STROHMEYER & CO., 122 Water St

PHILADELPHIA.

HONEY.—Fancy white 1-lb., 19¢@20¢; fair 1-lb., 18¢; fancy 1 1/2-lb., 18¢. No sale yet for dark.—Extracted, California, 8¢; Cuba strained, 60¢@70¢. per gallon.

BEEWAX.—24¢@25¢.

Oct. 10. ARTHUR TODD, 2122 N. Front St.

MILWAUKEE.

HONEY.—Choice white 1-lb., 19¢@20¢; 2-lb., 18 to 19¢; fancy white might bring 21¢@22¢. White extracted in barrels or half-barrels, 8¢@9¢; in kegs, 8¢@9¢; in cans or pails, 8¢@10¢; dark in kegs and barrels, 6¢@7¢. Demand good.

BEEWAX.—22¢@25¢.

Oct. 26. A. V. BISHOP, 142 W. Water St.

BOSTON.

HONEY.—New crop, 1-lb. sections, 18¢@20¢; 2-lb. sections, 17¢@18¢. Extracted, 6¢@8¢. Demand fair.

BEEWAX.—25 cts. per lb.

Oct. 22. BLAKE & HIPLEY, 57 Chatham Street.

Red Labels for one-pound pails of honey, size 3x4 1/4 inches.—We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for \$1.00; 250 for \$1.50; 500 for \$2.00; 1,000 for \$3.00; all with name and address of apiarist printed on them—by mail, postpaid.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

Advertisements.

2-lb. Square-Glass Honey-Jars.

WE have a New Supply of **Two-Pound Honey-Jars**, and can now supply our friends on short notice. Address,

CHAS. F. MUTH & SON,
Freeman & Central Ave., CINCINNATI, O.

COMB HONEY WANTED.

WE should be pleased to correspond with any one having **COMB HONEY** For Sale. We sell on Commission at highest market prices. Address,

S. T. FISH & CO.,
189 South Water St., CHICAGO, ILLS.
38A13t

The Chapman Honey-Plant.

PRICE OF THE SEED:

| | |
|----------|--------|
| 4 Ounces | \$1 00 |
| 10 " | 2 00 |
| 1 Pound | 3 00 |

Larger quantities by Express at Reduced Price. Sow very early in the spring or late in the fall. It vegetates in a low temperature. I have twelve acres that will bloom next spring. I shall sow two acres this fall. It is a success! H. CHAPMAN, 4404t VERSAILLES, N. Y.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

It is published every week, at 10s. 10d. per annum. It contains the best practical information for the apiarist. It is edited by Thomas Wm. Cowan, F.G.S., F.R.M.S., etc., and published by John Huckle, King's Langley, Herts, England.

Dadant's Foundation Factory, wholesale and retail. See advertisement in another column.

J. FORNCROOK & CO.,

MANUFACTURERS OF THE

"BOSS" One-Piece SECTIONS,



Patented June 28, 1881.

Will furnish you, the coming season, **ONE-PIECE SECTIONS** as cheap as the cheapest. Write for prices.

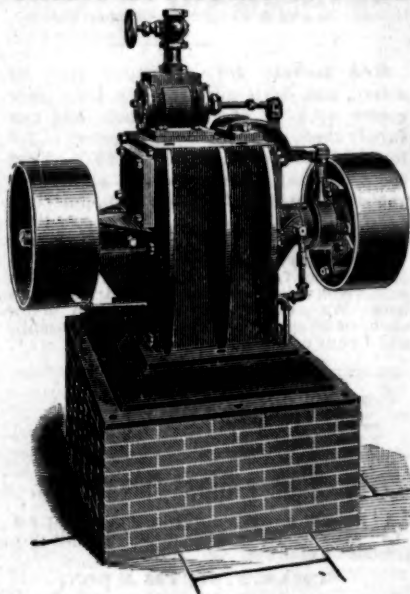
Watertown, Wis., Oct. 25, 1887.

A NEW ENGINE.

(ENTIRELY NEW INVENTION.)

WONDERFUL DEVELOPMENT
OF POWER AND SPEED!

GREAT ECONOMY OF FUEL



NO high-priced Engineers are required. Any person can manage it. No angular push, or dead center. Friction almost entirely overcome. It is the most compact Engine ever invented. It is perfectly governed. We also warrant it to attain a higher speed and develop more power with less fuel than any Engine in use.

Manufactured at the Cedar Rapids High Speed Engine Works, of Cedar Rapids, Iowa.

Send for a Circular. Address,
HENRY RICKEL, Pres.,
44Atf CEDAR RAPIDS, IOWA.

Dadant's Foundation Factory, wholesale and retail. See advertisement in another column.

EXCELSIOR HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, we have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the \$16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the \$8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The \$8.00 and \$10.00 Extractors have no covers.

| | |
|--|--------|
| For 2 American frames, 13x13 inches..... | \$8 00 |
| For 2 Langstroth " 10x18 " | 8 00 |
| For 3 " 10x18 " | 10 00 |
| For 4 " 10x18 " | 14 00 |
| For 2 frames of any size, 13x20 " | 12 00 |
| For 3 " 13x20 " | 12 00 |
| For 4 " 13x20 " | 16 00 |

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See advertisement in another column.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, \$1.25. Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
Agricultural College, Mich.

A Year among the Bees,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY **DR. C. C. MILLER.**

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

W. Z. HUTCHINSON,

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HAS published a neat little book of 45 pages, entitled, "The Production of Comb Honey." Its distinctive feature is the thorough manner in which it treats of the use and non-use of foundation. Many other points are, however, touched upon. For instance, it tells how to make the most out of unfinished sections, and how to winter bees with the least expense, and bring them through to the honey harvest in the best possible shape.

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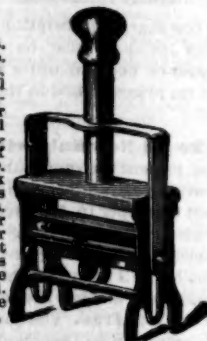
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